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Contents for Week of March 15, 1937. Vol. XVI. No. 5.

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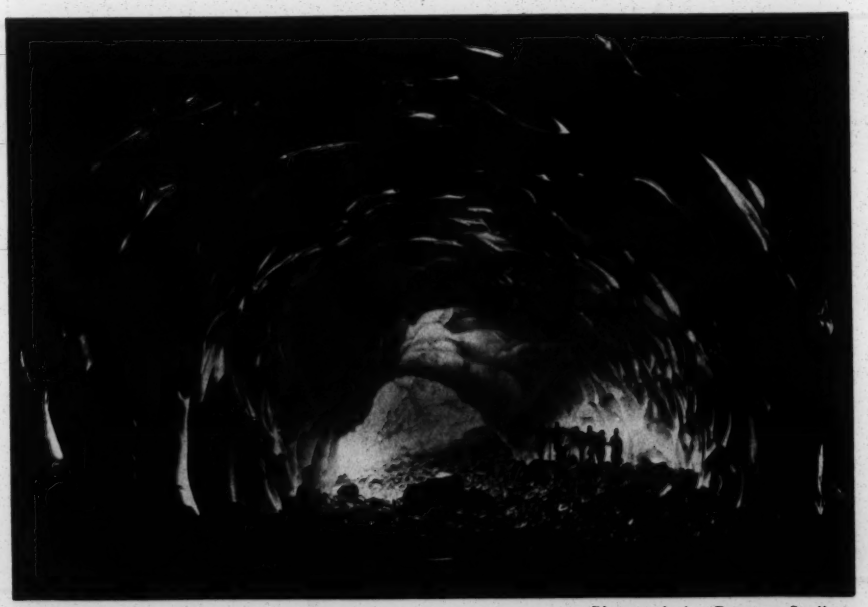

Photograph by Ranapar Studio

NATURE'S OWN ICE BOX TO KEEP A RIVER ON ICE

Caves and tunnels develop when water from a melting glacier courses along under the ice and emerges at the glacier's foot as a full-grown stream. This one, Wilbur's Cave on Mount Rainier, was named for former Secretary of Navy Wilbur after he went through an unexplored maze of subglacial tunnels to reach it. It is weird enough to have inspired Coleridge's description of "where Alph, the sacred river, ran through caverns measureless to man" below a "sunny pleasure-dome with caves of ice" (see Bulletin No. 5).

HOW TEACHERS MAY OBTAIN THE BULLETINS

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Oviedo, Watchdog of Spain's Northern Mines

A FIERCE conflict in the northern arena of Spain's civil war has raged around Oviedo. Rebel forces within the city, defiantly proclaiming their position "invincible," were besieged by loyal Asturian miners using dynamite.

Miners—without dynamite—in normal times consider the city their commercial center. Now the chief inland city of Spain's northwest coastal plain and piedmont, Oviedo was established in the 8th century to keep an eye on passes in the Cantabrican Mountains which lie just to the south. And for 1,100 years it has been a watchdog of the mountains' mineral wealth.

Variety of Minerals Within 15-Mile Radius

Sections of the Cordillera Cantábrica are practically worth their weight in iron. Within a radius of 15 miles of Oviedo have been located iron, coal, sulphur, and cinnabar mines, blast furnaces, and steel and zinc works. With such an abundance of the minerals in demand for modern manufactures, the region can forget that in Roman times it was famed as a source of gold.

With green parks and a refreshing view over the fertile plain below, Oviedo, with a population of 70,000, is a clean and cheerful contrast to its dingy mining neighbors. For the distribution of supplies and food throughout this region, Oviedo is the hub.

In return, mountain iron or coal from the collieries of villages in mountain pockets feeds the factories and foundries of Oviedo. A munitions industry has outgrown its plant and has taken over a former church building for its warehouse. Small arms and other iron goods are produced in the city. Marble quarrying is an additional activity.

Through the city to the seaport of Gijon, 18 miles north on the Bay of Biscay, normally pours a great stream of minerals for export. Much traffic passes through Oviedo. Local trains and bus service make connections with neighboring towns and with seaside industrial centers and summer resorts farther north.

A College and Cathedral Town

It is a "college town" as well as a commercial city, with a thousand or two students enrolled in its 300-year-old University, which has survived from the days of Philip III.

The cathedral, a good two centuries older than that, is still incomplete. But it commands special attention by reason of the highly prized relics which are stored within. Indeed, it commands special attention also because of its unusual facade; while one limestone tower lifts its ancient bells into the air, the other tower rises barely above the church roof.

Visitors to the cathedral—and virtually all foreign visitors to the town seek out this venerable building—rarely overlook a remarkable feature: two dim barrel-vaulted rooms, sole remnants of a primitive church constructed when Christianity was only 800 years old.

Then Oviedo was preparing to be the capital of the old kingdom of Asturias. There followed a period during which it was influential throughout northern Spain, as the residence of the kings of Asturias. But as Christian kings enlarged their realm on the trail of southward-retreating Moors, the capital was moved away, and Oviedo became locally important only.

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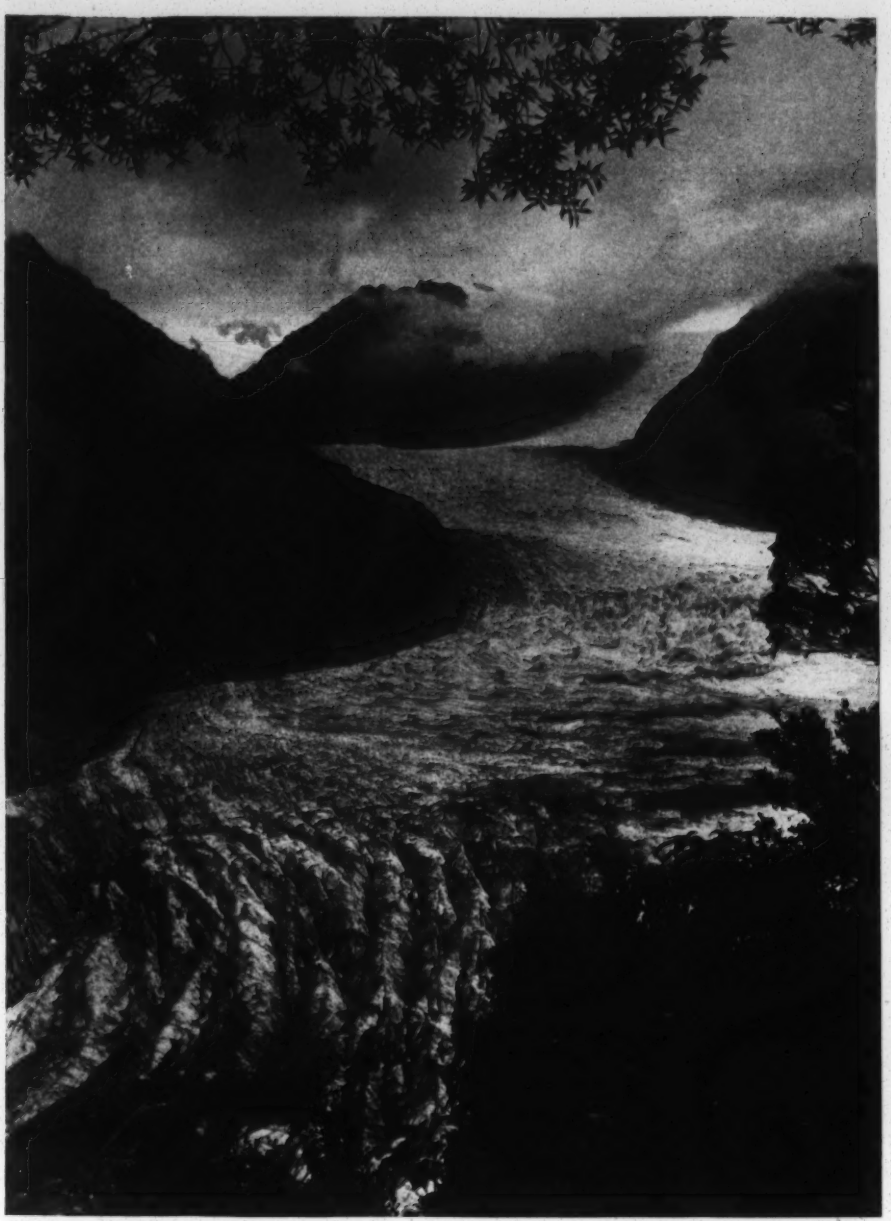

Photograph by W. Robert Moore

A FRIGID FINGER REACHES TOWARD THE TROPICS

New Zealand breaks the rule that glaciers usually stop near the lower limits of perpetual snow, above the timber line. Some of its rivers of ice wind over wooded slopes to end only among tree ferns and other subtropical vegetation. Fox Glacier, pictured in a frame of leaves, reaches down to 670 feet above sea level. Its surface is rough with patches of rock debris and with the sharp ridges of great crevasses (see Bulletin No. 5).

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A Palm Sunday Palm Monopoly Held by Bordighera

ON PALM SUNDAY—this year on March 21—dozens of green palm branches will be blessed in the basilica of St. Peter's, Rome, and distributed among its clergy. The palms will be supplied, as for nearly four hundred years in the past, by Bordighera, little town near the westernmost edge of the Italian Riviera.

Just why this particular community of 5,000, and no other, should have the privilege of supplying palms for the largest church in the world, may puzzle the curious. This old custom fulfills annually a Pope's promise made nearly four centuries ago.

"Wet the Ropes!" a Sailor Shouted

Visitors to St. Peter's recall a tall Egyptian obelisk standing between two fountains on the piazza in front of the basilica. In 1586 the obelisk was being slowly raised into position under the watchful eyes of Pope Sixtus V and a huge crowd of spectators. The tall shaft, 93 feet high without the base, weighed 332 tons. Aided by 150 horses and many rollers and cranes, 800 men strained at ropes to hoist the large monolith upright from a horizontal position. To prevent noises from distracting the engineers, spectators were strictly forbidden to speak. They watched breathlessly, but silently.

At a tense moment the ropes stuck and couldn't be budged; the obelisk threatened to come crashing down. The silence grew more tense.

"Wet the ropes!" shouted a sailor in the crowd.

When wet, the ropes tightened enough for workmen to settle the obelisk safely on its base. But as soon as that excitement was over, the sailor who had defied the order for silence was hurried before the Pope to be punished. Instead of any penalty, he was offered a reward, whatever he might ask. The favor he asked was that his native town, Bordighera, henceforth should have the exclusive right to supply the Palm Sunday palms for St. Peter's. It was granted.

Popular Winter Resort

Such a request seems natural enough when one remembers that thousands of palms lazily wave their glittering green plumes against the blue sky of the sailor's home town. Bordighera has been nicknamed "Patria delle palme"—"Home of the palm tree," because of the numerous date palms cultivated in and near it.

Situated 91 miles up Italy's coast from Genova (Genoa) on a rocky promontory jutting out into the Mediterranean, Bordighera is considered one of the warmest of the many winter resorts strung along the palm-fringed Ligurian Riviera. It has a mean winter temperature of 50.9°. Snow falls seldom. North of the town, protecting it from winds, are hills covered with olive groves and pines.

Because of the excellent climate, Bordighera is famous for its gardens. Quantities of roses and carnations are raised here and shipped into Austria and Germany. The road to San Remo is lined with floral showplaces and extensive nurseries that export flowers and palms all over the world. Bordighera shops exhibit interesting samples of ingeniously-plaited palm leaves.

Although, in some years, the dates ripen enough to be eaten, Bordighera's date palms are cultivated not for food but chiefly for their leaves, which are used for decorative purposes in religious and other festivals. The leaves sent to St. Peter's on Palm Sunday are kept tightly bound for several months before cutting

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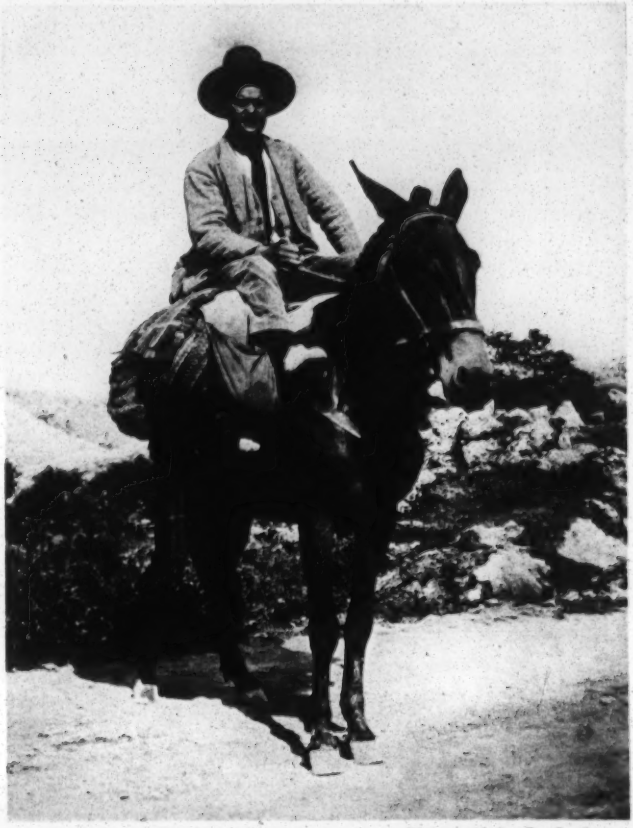
The city enjoyed an era of peace that was almost suspended animation. Practically its only subsequent claim to international prominence, except its present dramatic conflict, was a desolate day during the Napoleonic struggle when it was sacked by the French.

Note: Additional descriptive material about war-ravaged Spain will be found in "We Escape from Madrid," *National Geographic Magazine*, February, 1937; "Turbulent Spain," October, 1936; "Palette from Spain," March, 1936; "Montserrat, Spain's Mountain Shrine," January, 1933; "Madrid Out-of-Doors," August, 1931; "Pursuing Spanish Bypaths Northwest of Madrid," January, 1931; "Seville, More Spanish Than Spain," "On the Bypaths of Spain," and "Barcelona, Pride of the Catalans," March, 1929; and "From Granada to Gilbraltar," August, 1924.

See also in the GEOGRAPHIC NEWS BULLETINS: "Valencia, Now Spain's 'Spare' Capital," week of February 8, 1937; "Cádiz, Spain's Mystery Port Since Europe's Dawn," week of February 1, 1937; "Málaga, with a Climate for Loafing but an Eye for Business," week of January 25, 1937; "Burgos, Rebel Headquarters in Northern Spain," week of December 21, 1936; "Montserrat, Spain's Monastery 'White House,'" week of November 30, 1936; "Madrid, Spain's Stricken Heart," week of November 23, 1936; "El Escorial, Where Spain Buried Her Past Royalty," week of November 9, 1936; "Spain's Stormy History Recorded in Madrid's Prado Paintings," week of October 26, 1936; "Toledo's Alcázar a Casualty in Spain's Civil Strife," week of October 12, 1936; and "Spain—Country of Contrasts and Contradictions," week of October 5, 1936.

Bulletin No. 1, March 15, 1937.



Photograph by D. G. Carr

ALL ROADS LEAD TO OVIEDO ON MARKET DAY

An Andalusian farmer, typical of those who crowd Oviedo's market building, jogs over a lonely mountain trail with a load of dried figs in the panniers under his saddle blanket. Rope-soled shoes, red scarf, and broad-brimmed hat are distinctive touches to his costume.

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The Geography of Wills and Inheritances

AN UNUSUAL will provides that no heir may collect from the benefactor's estate of $20,000 until after he has made two trips to Europe. Thus a will recognizes geography at last, after geography has for centuries been influencing the world's varying customs in regard to wills and inheritances.

What becomes of a man's property after he dies is very much a matter of geography. Wills have been written in America since the days of the first colonists, and, therefore, we are likely to assume thoughtlessly that will-making extends back into history and over the world as a universal institution. But in England, 400 years ago, wills bequeathing land were entirely prohibited by law although they had existed before and were later allowed. In France and in all the Mohammedan countries only a part of one's property can be willed. A Burmese Buddhist cannot make a will. In India will-making has come to be recognized only as a result of British influence, and is not yet widely practiced.

Willing Power Greatest in England

Among our primitive ancestors there was no such thing as a will or even inheritance by a limited number of heirs, because there was nothing to inherit or to will. All property was community property.

When private ownership of things and land came to be recognized, the governing unit—village, tribe, or state—found that it had to take some action when a man died, leaving property. Otherwise anyone might seize the ownerless property, though a total stranger to or even an enemy of its former owner. Tribal concepts of fair play recognized that the dead man's family should have first claim to his former belongings.

In no country is the power to will so complete as in England. An Englishman can disinherit wife and children, willing all his property outside his family.

This English law was adopted by the American Colonies and the United States; but in many of the States the old rules have been altered by legislation which guarantees certain shares to widow and children. In France and the other Latin countries, where the legal systems are built on Roman law, the rights of widow and children have been protected for many centuries against the willing power of the husband and father.

Will-Makers Poor Prophets

Within varying limitations, the power to will all or some property is now recognized throughout Christendom and the Mohammedan countries, in China, Japan, and certain other lands. This power to project one's wishes into the unpredictable future has brought some strange results. One systematic maker of a will, living in the seventeenth century, and pitying the sad fate of unransomed captives taken in the Near East, left a trust fund, which among other things is supposed to be devoted today to the "redemption of Turkish prisoners."

A philanthropist in St. Louis in pioneer days left large real estate holdings in what is now the heart of the city, the income to be devoted to helping stranded travelers on the way to become "bona fide settlers in the West." In recent years the trustees have been unable to find beneficiaries meeting the will's description, and after much difficulty have prevailed on the courts to permit them to turn the income over to the local Travelers' Aid Society.

A classic case of poor prophecy is found in the will, dated 1801, of the founder

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to give them their pale color. In Rome, they are turned over to nuns to be plaited before they are taken to St. Peter's.

Bordighera, with its mild climate, floral gaiety, and beautiful scenery, attracts many winter visitors. Ever since the English royal family made the resort fashionable, it has had a large English colony, which lives chiefly in villas and hotels in the new part of the town. As in medieval days, one passes through gates into the picturesque "old town," where narrow streets wind between tall houses.

Note: Bordighera and the Egyptian obelisk, the successful raising of which gave Bordighera its palm monopoly, are pictured and described in "Life's Pattern on the Riviera," *National Geographic Magazine*, January, 1935; "Man and Nature Paint Italian Scenes in Prodigal Colors" (color insert), April, 1928; "Under Radiant Italian Skies" (color insert), August, 1926; "Italy, Land of History and Romance," April, 1924; "The Splendor of Rome," June, 1922; "From London to Australia by Aeroplane," March, 1921; and "Inexhaustible Italy," October, 1916.

Bulletin No. 2, March 15, 1937.

Photograph by G. R. Ballance

PALM AND BEACH GO TOGETHER ALONG THE ITALIAN RIVIERA

In the string of seaside towns which line the Mediterranean crescent west of Genova (Genoa), sandy beaches are shaded by palm trees imported by Saracens long ago. The palms flourish along fashionable promenades and straggle down the beach of workaday fishing quarters where boats are beached when not in use. Bordighera gets more publicity for its trees by furnishing branches for the Palm Sunday ceremonials at St. Peter's in Rome.

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Hospitable Rutbah Wells In An Inhospitable Desert

LINDBERGH made a non-stop flight over the Atlantic Ocean, but not over the Syrian Desert. Brief dispatches from the non-committal Colonel reported simply that because of a severe sandstorm he was grounded for the night of February 17 at Rutbah Wells.

This mid-desert radio, police, and rest station gets into the news by preventing news. Sheltering caravans from sunstroke or bandits and rescuing stranded fliers, it averts such headlines as "Travelers Attacked by Bedouins" or "Plane Disappears in Desert." The English officers who supervise it certainly fulfill the ambition to "live in a house at the side of the road and be a friend to man."

Lone Landmark in Hundred Miles of Desert

The fortified station of Rutbah Wells, despite its international fame, is only a single building, possibly the only permanent abode for a hundred miles in all directions. It is a solitary landmark in the billowing treeless desert, marking the location of shade and water. Sight of it is good news to man and beast, for sunstroke and sandstorm are constant menaces in this area.

This outcropping of hospitality in an inhospitable area lies on the direct caravan and air mail route across Asia Minor between Jerusalem or Damascus and Baghdad. It is a few miles more than halfway on the eastward journey of about 600 miles from Bible scenes to the capital of the Arabian Nights country.

Western Outpost of Iraq

Rutbah Wells lies about 100 miles within Iraq's boundaries, which here embrace a particularly desolate part of the Syrian Desert. Although now belonging to the newly independent state of Iraq, it is the essence of traditional "Arabia Deserta." It is one of the westernmost settlements in Iraq.

The lone structure is a gray stone fortress built in a hollow square, with ramparts on the walls and low towers at the corners (see illustration, next page). Barbed wire and sand bags are additional fortifications beyond the rectangle, and a barbed wire avenue leads to the single gateway. This businesslike architecture has helped teach that well-stocked camel caravans are not Allah's express answer to the hungry Bedouin's prayer, that airplanes are not operated simply as moving targets for nomadic sharpshooters, and that gasoline—useless to the camel driver—must not be stolen for the lovely cans.

Remains of a Vanished Race

Once Rutbah was headquarters for a camel corps of desert police. Now, provisioned by truck from Baghdad, it has its own power plant for lights, refrigeration, and radio, and is a center for that more modern ship of the desert, the airplane.

From time immemorial, the wells of Rutbah have attracted nomadic desert people and their flocks of camels, fleet mares, and goats. Bedouins still pitch their smoke-blackened tents woven skillfully of black goat's hair near the water holes. Or there may come a donkey-riding tribe of Selaib, baffling desert gypsies who know more desert secrets than the Bedouins, yet hint of descent from stranded English Crusaders.

When civilization descended upon Rutbah (by air), Europeans found eight

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of "Sailor's Snug Harbor" in New York City. He left an endowment for a home for aged seamen from "sailing vessels." Steam came into use, and soon there were practically no old men from sailing vessels to seek entrance to the home.

Wills have set up funds for the benefit of parrots, horses, goldfish, and dogs. Recently, in California, a cat was left for life a handsome residence and $15,000.

The oldest known will, written on papyrus, was prepared about B. C. 2550 in Egypt. By its terms a priest left his property to a fellow priest. Both Greece and Rome had manuscript wills. In the seventh century wills in parts of Europe were written on bark. During Anglo-Saxon times in England wills were written in triplicate, the copies being consigned to three separate custodians.

At one time oral wills with no special formalities were as valid as written ones in England. Now, in most countries, wills must be written, signed, and witnessed. Wills written on almost any material will be valid. In one case a will was written on a door, which was removed from its hinges, taken to court, and duly probated.

In nineteen of the United States, "holographic" wills are recognized. These are entirely in the handwriting of the will-maker and are signed by him, but need not be witnessed. In twelve States, in fact, it is not even necessary to date holographic wills. In Louisiana, where the basic law is of French origin, provision is made for the most unusual will valid in the United States—the mystic or secret will. Such a will is not openly presented to witnesses but is sealed up by the maker, and then presented to a notary and seven witnesses, who all sign their names on the envelope.

Bulletin No. 3, March 15, 1937.

Photograph by Vittorio Sella

NO LONGER A NECESSITY FOR THAT "LAST WILL AND TESTAMENT"

The practice of willing property is so old that early wills were recorded on papyrus. Egyptians made their early legal foolscap by converting this swamp weed, plentiful enough along the banks of the Nile, into thin sheets which gave us a model and a name for "paper." The fanlike crest serves art as well as law, for it inspired many decorative designs of Egyptian architecture. The papyrus swamp in the picture is in Uganda, south of Egypt's present boundaries.

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Alaska's Black Rapids Glacier Revives Curiosity About "Rivers of Ice"

A NEW "galloping" glacier is breaking all speed limits. The Black Rapids Glacier, about 125 miles south of Fairbanks, Alaska, has been reported as moving almost a mile a month instead of the more usual 10 to 20 yards.

Just such a spurt of speed frightened mankind into a systematic study of glaciers, which was instituted only a century ago on the Aar Glacier in Switzerland. The task of counting glacier "snouts" is not yet complete, but they are known to be going their sluggish way down the higher peaks of every continent except Australia. In the Alps alone, 2,000 are known.

Nine National Parks Contain Glaciers

Specimens of these Ice Age souvenirs survive in six of the United States; Montana, Wyoming, Colorado, Washington, Oregon, and California. Samples have been corraled in ten national parks, with most spectacular exhibits in Mt. Rainier National Park, with 27 glaciers extending their pale tentacles down the single peak, and in Glacier National Park, where 60 small glaciers lie. Sequoia National Park, more famous for its trees, has a couple of glaciers for that authentice primeval touch in the background. Yosemite Valley, a perfect example of glacial action, keeps glaciers around to show how such valley-carving is done. Mount Olympus, Grand Teton, and Rocky Mountain National Parks have several remnants of vast prehistoric glaciers.

The blue-ribbon specimens of the national parks' glacial exhibits are in Alaska, which raises the finest glacier crop outside the polar zones. Mt. McKinley National Park, with the continent's highest peak, and the Glacier Bay National Monument, where 11 glaciers reach the sea, have some spectacular types.

The United States also claims possession, by virtue of recent explorations by Byrd and Ellsworth, of slices of the very largest glacier still in existence—the continental glacier doming Antarctica with a huge ice cap of great thickness. Here an area exceeding that of the United States is iced over, with such giant ice tongues licking into the ocean as Beardmore Glacier, 10 to 20 miles wide and 125 miles long. The glacial superiority of Antarctica is appreciated in contrast with the size of glaciers elsewhere, most of which have a fraction of a mile as the largest dimension.

Glaciers Covered with Colored Stripes, Forests, and Dandelions

Many are so small that they can be distinguished from glorified snowdrifts only by their motion. For glaciers, although composed of brittle ice weighing tons per square yard and rocklike with a crystalline structure similar to marble, actually move with a mysterious flow and not with a slide like an avalanche of snow. Markers on the surface reveal that the ice rivers "flow" more rapidly in the center than on the sides, faster on top than beneath. But rapid movement for a glacier is usually slower than slow motion, for the rate is measured in inches per day. Some runaways may cover 30 feet in a day, like Childs Glacier in Alaska, but most of them would keep pace with the hour hand of a watch.

The majority of glaciers are melting more rapidly than their rate of advance. Nunatak Glacier in the Yukon receded six miles in 25 years.

Although glaciers furnish rather primitive transportation, many hitch-hiking boulders ride on them. Belts of rocky debris, or moraines, decorate them with flowing stripes or polka dots. The foot of Malaspina Glacier, spreading fanwise over a 30-mile front in Alaska, bears so much debris that a thriving forest has taken root on it. A glacier buried under its moraine in North Greenland is now covered with mosses and grass, and in summer is dotted with dandelions, poppies, and buttercups. Hidden Glacier in Alaska is concealed beneath what appears to be a normal landscape, until melting ice allows the soil to sink in "kettle holes."

Moraines give colorful variety to glacial styles. The usual conservative model is a snowy white patch or strip on a mountainside, but some are glittering blue-green with darker gashes in crevasses. Dark belts of debris sketch in stripes either crosswise or lengthwise. Variegated Glacier in Alaska has stripes of white, red, black, purple, green, orange, and clear ice. The Baltoro Glacier of the Hindu Kush has been seen with fifteen moraines, each different.

The continental glacier or ice cap of Greenland is a vast waste of dazzling white, second in size only to Antarctica. In contradiction to their names, more than half of Greenland is white with ice, while Iceland is only about one-eighth snowed under. The smaller island has about 120 known glaciers, while Greenland's central ice dome pushes in all directions toward the sea in 200 different glaciers.

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wells carved 40 to 50 feet deep in solid limestone, so old that hoisting cords have worn the rock. Bedouins explained the wells as work of "the old people," some unknown prehistoric folk.

Hundreds of graves of an unidentified race mark the nearby hillsides, and beyond are scattered remains of stone walls and primitive mine shafts. They arouse conjecture about a vanished city built in ages past, mysteriously maintained in what is now barren desert, and just as mysteriously wiped out. Even the Bedouins know little about them.

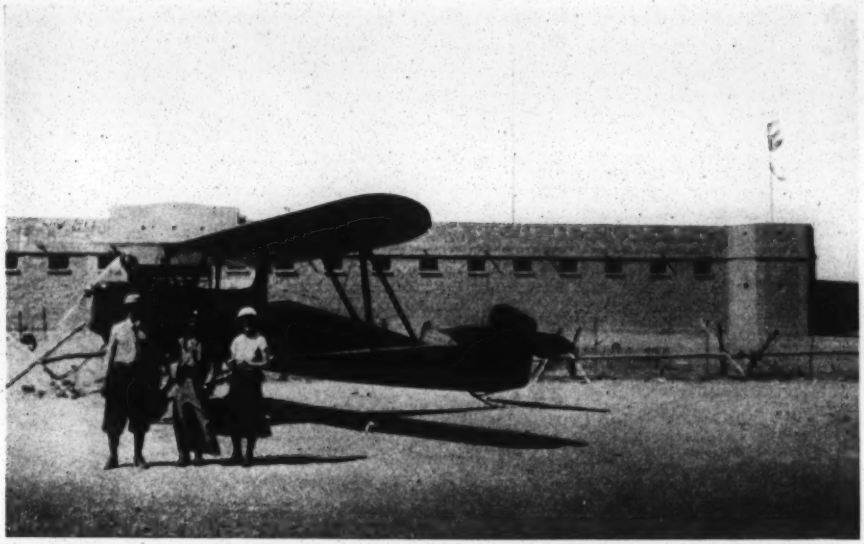
Plow Track Trail A Minor Wonder of the World

From those days until recently Rutbah has been avoided except by fearless nomads seeking water. The water route around the Arabian peninsula, several times longer, held less danger and hardship. A regular air line, however, revived the ancient short cut directly across the then unmapped wastes, and the wells of Rutbah resumed their strategic importance.

The route was marked less than twenty years ago by driving motor caravans across the desert and deepening the track with plows. Flinty gravel of the hundreds of arid miles wore down many plow points, but the resultant track has marked the way to reasonably safe transport. The straight furrow, surely one of the world's longest, is accentuated by arrows and at intervals of 15 to 30 miles surrounds circles to mark emergency landing fields.

Note: Other references to Rutbah Wells and the Syrian Desert will be found in "Bedouin Life in Bible Lands," *National Geographic Magazine*, January, 1937; "Flying the World," June, 1932; "Citroën Trans-Asiatic Expedition Reaches Kashmir," October, 1931; and "From England to India by Automobile," August, 1925.

Bulletin No. 4, March 15, 1937.



Photograph from Charles Healy Day

RUTBAH IS A DESERT RENDEZVOUS

The massive building which serves as police, wireless, and rest station has grim fortresslike walls, with openings high above the heads of possible intruders and watchtower projections at the corners (right). The barbed wire barricade appears between the fortress and the plane. The gateway to the quadrangle is practically hidden by the plane. The flyers wear sun helmets as a precaution against sunstroke even for the short distance between plane and fort.

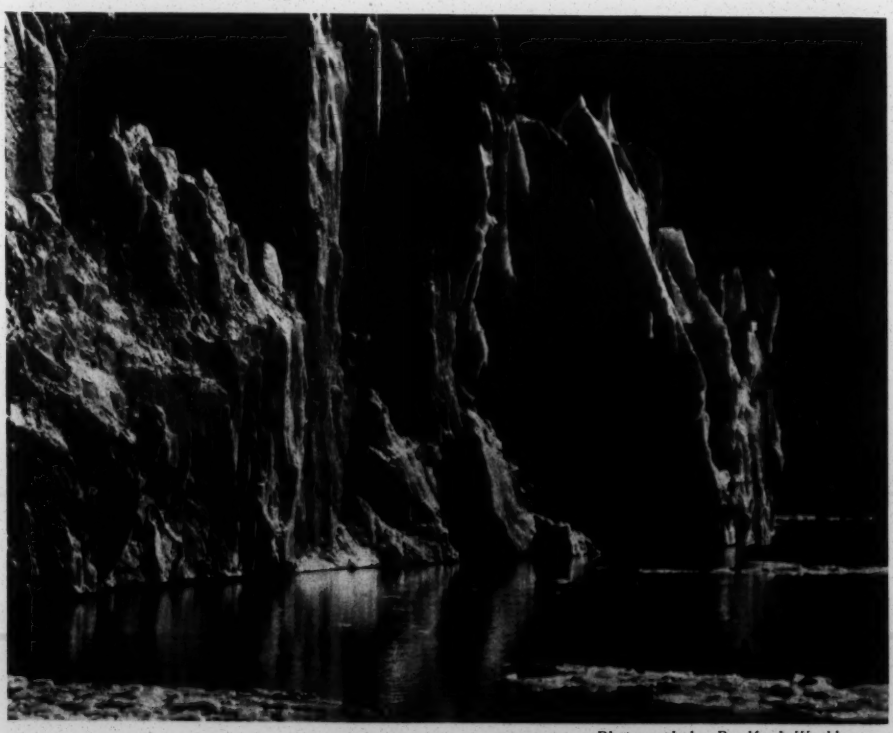
A roll call of glacial giants would bring up the names of Pamir Glacier, in the Himalayas, possibly 100 miles long; Hubbard Glacier in Alaska, 90 miles long and in places 10 miles wide; and the ice cap of Svalbard (Spitzbergen).

The method of a glacier's growth is more spectacular than the mighty-oak-from-little-acorn contrast. For the huge ice-rivers are merely overgrown colonies of snowflakes, which have become compact granular ice.

Glaciers flourish virtually on the Equator, wherever peaks are high enough. The very tip-top of Africa, Mount Kilimanjaro (19,710 feet) in Tanganyika, is girdled with no less than ten glaciers, although it is volcanic. Indeed, South American glaciers are frequently tucked into the pockets of quiet volcanic peaks in the Andes, and at Cerro Alto, in Ecuador, a glacier has taken possession of a second-hand crater.

Note: In "Crater Lake and Yosemite Through the Ages," the *National Geographic Magazine* for March, 1937, describes and illustrates with paintings the action of ancient glaciers. See also "Exploring Yukon's Glacial Stronghold," June, 1936; "New Zealand 'Down Under,'" February, 1936; "With Wild Animals in the Rockies," August, 1935; "The Conquest of Mount Crillon," March, 1935; "Flying Around the North Atlantic," September, 1934; "Manless Alpine Climbing," August, 1934; "Western National Parks Invite America Out of Doors" (Duotone Insert), July, 1934; "Peaks and Trails in the Canadian Alps" (Duotone insert), May, 1934; "Nature's Scenic Marvels of the West" (Duotone insert), July, 1933; "Washington, the Evergreen State," February, 1933; "Air Adventures in Peru," January, 1933; "First Over the Roof of the World by Motor," March, 1932; "On the World's Highest Plateaus," March, 1931; "A Walking Tour Across Iceland," April, 1928; "Canada from the Air," October, 1926; "Through the Great River Trenches of Asia," August, 1926; "The Conquest of Mount Logan, Canada's Loftiest Peak," June, 1926; "The MacMillan Arctic Expedition Returns" and "Flying Over the Arctic," November, 1925; and "The Mother of Rivers," April, 1925.

Bulletin No. 5, March 15, 1937.



Photograph by Bradford Washburn

FACE TO FACE WITH AN ICEBERG-ABOUT-TO-BE

The foot of South Crillon Glacier, on Mt. Crillon in Alaska, pushes into Crillon Lake at the rate of two feet a day, and the lake fights back by eating into the 160-foot-high ice walls, until great chunks fall off as icebergs. When tons of ice thunder down from this ice cliff, the lake foams up in six-foot waves on beaches a mile away. The glacier's cross section shows a marbled effect of blue and green veined with streaks of crushed rock and ruddy dirt.